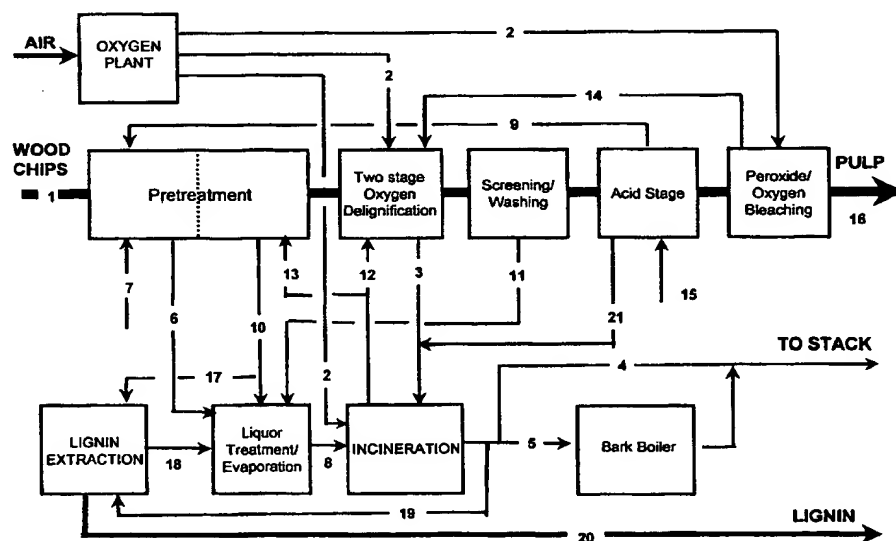




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(54) Title: PROCESS FOR OXYGEN PULPING OF LIGNOCELLULOSIC MATERIAL AND RECOVERY OF PULPING CHEMICALS

**(57) Abstract**

The process of the present invention relates to a substantially sulfur free process for the manufacturing of a chemical pulp with an integrated recovery system for recovery of pulping chemicals. The subject process is carried out in several stages involving physical and chemical treatment of lignocellulosic material in order to increase accessibility of the lignocellulosic material to reactions with an oxygen-based delignification agent. Spent cellulose liquor comprising lignin components and spent chemical reagents is fully or partially oxidized in a gas generator wherein a stream of hot raw gas and a stream of alkaline chemicals and chemical reagents is formed for subsequent recycle and reuse in the pulp manufacturing process.

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ABSTRACT OF THE DISCLOSURE

A substantially sulfur free process for the manufacturing of a chemical pulp with an integrated recovery system for recovery of pulping chemicals is carried out on

5 in several stages involving physical and chemical treatment of lignocellulosic material in order to increase accessibility of the lignocellulosic material to reactions with an oxygen-based delignification agent. Spent cellulose liquor comprising lignin components and spent chemical reagents is fully or partially oxidized in a gas generator wherein a stream of hot raw gas and a stream of

10 alkaline chemicals and chemical reagents is formed for subsequent recycle and reuse in the pulp manufacturing process.

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